

the same liquid can be used for the working liquid of the heat pipe and of the generator.

In the Claims

Please delete claims 1-6 and replace them with the following:

7. A process for producing electrical energy from thermal energy comprising the steps of:
supplying thermal energy to a heat pipe containing a working fluid and a capillary insert to evaporate the working fluid in a vaporizer section of the heat pipe;
directing the resulting vapor flow through the heat pipe to a condenser section of the heat pipe where the vapor is condensed and the resulting condensate returns to the vaporizer section via the capillary insert;
entraining liquid droplets of an electrostatic generator by means of the vapor flow from the vaporizer section of the heat pipe, the electrostatic generator having a liquid working medium to supply the liquid droplets, a solid working medium for charges separation, and a pick-up electrode within the condenser section of the heat pipe;
passing the vapor entrained with the liquid droplets by the solid working medium to cause separation of the electrostatic charges between the solid and liquid working media;
displacing of the resulting charged liquid droplets-working medium under the action of external forces caused by the kinetic energy of the molecules of the vapor flow, wherein the external forces perform work against the Coulomb forces; and
passing the liquid droplets-working medium past the pick-up electrode to pick up electric charges that are mechanically displaced by the external forces against the Coulomb forces to generate electrical energy from the thermal energy.
8. The process of claim 7, wherein said electrostatic generator also has a first external electrode connected to said solid working medium and a second external electrode connected to said pick-up electrode.
9. The process of claim 8, wherein the pick-up electrode is a grid.